Improving Cancer Pain Management Project – The Challenge of Changing the Clinical Behaviour of Junior Medical Staff

Introduction
The National Health and Medical Research Council’s (NHMRC) National Institute of Clinical Studies (NICS) Fellowship program supports identification and improvement of important gaps between high quality evidence and routine care. Within this fellowship (co-sponsored by the Victorian Quality Council – VQC) the Improving Cancer Pain Project, was undertaken to improve the documentation and management of cancer pain in a tertiary hospital by junior medical staff.

The project is scheduled for completion in July 2008. This paper focuses on preliminary data that has identified barriers and enablers for changing the behaviour of junior medical staff and designing strategies based on this information. It includes a review of themes facing the novice “change agent” emerging from experience as a NICS-VQC Fellow.

Background
Pain is under-recognised and under-treated in acute hospitals (van den Beuken-van Everdingen et al 2007). NICS recognised a significant gap in pain management between evidence and current clinical practice (National Institute of Clinical Studies 2002). Although professional knowledge, attitudes and nursing pain assessment rates have been shown to be improvable, no systematic hospital-wide intervention has yet to be associated with sustained improvement in pain (Goldberg et al 2007).

Institutional background
The project is being undertaken at Peter MacCallum Cancer Centre, a 125-bed specialist oncology hospital in Melbourne, Australia.

Many projects have been implemented to improve treatment of cancer pain at our Centre in the past five years. These have included:
- introducing documentation of pain as a fifth vital sign;
- use of near peer facilitators to improve nursing documentation of pain;
- participation in the NICS pain management improvement program; and
- development of a handbook on cancer pain management for use by Resident Medical Officers (RMOs).

With these initiatives completed by 2005, it was recognised that the next step was to address the practice of the doctors prescribing analgesia.

Initiative
The NICS-VQC Fellowship project was developed to improve cancer pain management through the implementation of best practice principles. Interventions targeted several levels of the organisation to promote change in the behaviour of the target group (RMOs). The goal was to improve pain documentation by this group and to improve their prescription of opioids.
Implementation

Target group
RMOs were the target group for several reasons. Firstly, RMOs see inpatients daily, and hence they are able to address pain regularly. Secondly, as early career professionals, they may be more amenable to changing their clinical behaviour. Thirdly, they rotate from (and to) other hospitals and lessons learnt could be disseminated to other hospitals.

RMOs work in a complex system and it was recognised that several other organisational factors might influence their practice. Therefore, understanding key clinician and organisational barriers and enablers within a public hospital was an important objective.

Project design
There were 14 resident positions filled by up to 19 residents per three-month rotation. The number of positions was increased to 16 in January 2008. Five rotations of residents were studied during the project. Given the relatively small number of residents, a quasi-experimental pre and post study design was chosen.

Baseline assessment of practice was undertaken through audit and interviews with key hospital personnel. From this process and organisational mapping, a barrier analysis was completed prior to commencement of interventions.

Data collected at the commencement and conclusion of each rotation included:
- a test of application of cancer pain knowledge;
- surveys of knowledge, attitudes and perceived barriers and enablers to cancer pain management (KABE); and
- audits of pain documentation in medical histories and analgesia prescribing.

Face-to-face small group feedback occurred at the conclusion of each rotation.

Intervention
Taking advantage of the three month turnover of residents, each rotation was treated as an action cycle (Graham et al 2006 - Slide 7). This approach allowed discarding of ineffective interventions, enhancement of previous interventions, and introduction of new initiatives. Interventions targeting the RMOs included different teaching methods, development of resources and feedback on performance (Slide 12).

Interventions that targeted other aspects of the organisation during the project included: raising the visibility of pain as a quality issue; mobilization of several committees; and engagement of and feedback to other health professionals. These are outlined on Slide 14.

Evaluation
At the time of writing, the fifth and final rotation of residents had commenced. Preliminary thematic analysis obtained through audits, surveys and feedback sessions are reported below, along with strategies initiated in response to them and exploration of issues facing the novice “change agent”.

Barriers and enablers
Whilst identifying barriers and enablers, three levels of influence on RMOs’ practice were recognised, relating to the individual clinician (RMOs); the organization; and the health system (Slides 9 and 10).
Clinician (RMO)

- **Education/Access**
The applied knowledge of residents on commencing their rotation was deficient in several areas, including initiating and titrating opioids, routine prevention of adverse effects and misconceptions regarding opioid tolerance and prevalence of addiction. Because of competing clinical duties, lack of time and periods of night duty during a 13-week rotation, accessing RMOs for teaching was a significant barrier.

- **Insight**
When questioned about their opioid prescribing practices, most RMOs replied that their decisions were based on habit, and that they were unaware of common misconceptions about pain management. RMOs also reported that their seniors also had poor insight into their own practice and may overrule the principles taught by palliative care staff.

- **Influence of senior staff**
Residents identified their senior staff as being significant in influencing their practice. In units where pain management was a low priority, lack of insight into best practice, lower documentation of pain, and more frequent prescribing errors were evident. It was often these RMOs who did not attend “mandatory” teaching as their seniors felt that their clinical duties had priority over formal teaching. An additional barrier was that some RMOs only saw senior staff once or twice a week for a ward round, often with little emphasis on teaching.

- **Resources**
At initial feedback sessions with senior nursing staff and residents, a common barrier identified was lack of ward resources for management of cancer pain. The lack of bedside and intranet resources was a significant barrier to the busy resident who needed easily accessible information in an easy-to-read format. This suggested a key strategy to adopt in this project.

Hospital

Whilst Peter MacCallum’s strategic plan (2007) is for all patients to have a “pain-free experience” the reality for junior doctors is that “pain is not even on my radar as an issue”. This chasm between intention and reality is due not only to individual factors, but to aspects of the organization in which they operate. Barriers identified at this level included staff turnover, resources for medical teaching and professional territory issues.

- **Staff turnover**
High staff turnover generated a significant obstacle to organisational change. Even if staff can be accessed for teaching those who reach an anticipated level of competency then move to other positions away from the ward or to other institutions. This aspect was hoped to be utilized in the project to disseminate best practice principles; however, it is difficult to make any improvements “stick” within an institution without the support, expectations and behaviour modeling of senior health professionals.

- **Teaching resources**
Residents, and the RMO manager, reported that Palliative Care Unit (PCU) staff were major enablers for teaching about cancer pain. The ability of the PCU to expand this role was significantly limited by staffing resources and competing clinical duties. Thus, addressing this issue became another key priority of the project.
• **Professional territory**
The final organisational barrier identified by RMOs was related to professional territory issues: firstly between the PCU and other units, and secondly between junior medical and nursing staff.

If a unit is hesitant to refer to the PCU, then RMOs report a sense of tension when they can see a patient in pain but they are restrained in asking for help. Consequently, the opportunity to teach residents at the bedside can be limited and the likelihood of unusual practice habits and detrimental attitudes to optimal pain management may develop.

The second demarcation dispute occurs because nursing staff often wish to involve the pain teams earlier but cannot refer unless through a junior doctor. RMOs, in turn, feel that they should have ownership of the problem but they do not have the clinical capacity to address it. Perhaps because of this, they resist advice or reminders from nursing staff, preferring advice to come from their seniors, specialist pain teams or pharmacy staff.

• **Organisational enablers**
Organisational enablers that facilitated RMOs’ practice included the activities of several committees that refocused the hospital on the issue of pain. The RMO/Registrar committee was a forum where audit results could be reported to RMOs. The engagement of the Clinical Governance Committee, through biannual reporting from the Pain Steering Committee, was important as a formal process of reporting audit results to hospital management and creating a fulcrum for organisational change.

**Health System**
Health system barriers affecting RMOs included bed pressures and the lack of expectation of formal competency in pain management in the oncology sector.

• **Bed pressures**
Pressure for beds put a high workload priority on RMOs to discharge patients. As one RMO stated, when the pressure is to get a patient out of hospital and the patient does not report pain, “why open that can of worms?” when it could prolong the stay and reproach from senior medical staff and bed managers.

• **Profession expectations**
This barrier is more subtle but it impacts not only on specialist oncologists’ practice but also on the teaching of their junior staff. A Palliative Medicine specialist has a period of mandatory training in oncology to understand the complex clinical issues in cancer pain management either before or during the palliative phase. However, specialist oncology trainees do not have mandatory training in pain and palliative care, which potentially impacts on their knowledge, attitudes, practice and teaching related to cancer pain.

**Strategies**
Strategies to address barriers and facilitate enablers were implemented progressively. These included: attempting different ways to access RMOs for education; use of PCU staff as reminders and models of behaviour; and development of resources. Slide 11 outlines the relative efficacy of these interventions (Bero et al 1998).

**Access**
Interactive rather than didactic teaching methods are more potent in creating behaviour change (Bero et al 1998). Although RMOs saw PCU staff as key clinical teachers about cancer pain the clinical duties of PCU staff limited formal bedside teaching. As such the opportunity for residents
to attend a ward round for bedside teaching was created. This was not attended by any residents in
the pilot rotation. They cited lack of available time and clashes with other duties as reasons.

Accessing residents proved one of the most significant barriers to effecting behavioural change.
Participation in established “mandatory” activities became important to convey key messages.
These interventions included a presentation at orientation, a cancer pain management lecture, and a
feedback/discussion session. However, attendance at “compulsory” lectures ranged from between
one and 10 (of a possible 19 residents) during a rotation. An outreach initiative was then introduced
in the final rotation in an attempt to reach more RMOs face-to-face.

Reminders and behaviour modeling
Feedback of audit results was provided to residents in an attempt to improve insight into their
practice. However, because of the access issues outlined earlier, a more potent strategy was to
utilize clinical PCU staff to seek out residents when errors were identified (either on referral of a
patient or from collaborative reporting by a nursing colleague) and to use that opportunity as a
“teachable moment” to remind the RMO of best practice. The lanyard card developed with opioids
conversion charts on one side and 5 “TopTips” on the other (Slide 13) became an important
reminder tool that PCU staff could refer to in this moment. The increase of nurse consultant time
from 0.4 EFT to 1.8 EFT has allowed for this intervention.

Resources
In response to RMOs’ request for resources, posters with conversion charts and a summary of
principles of cancer pain management were developed and distributed to the wards. The lanyard
cards were subsequently developed at the RMOs’ request. Dissemination of the guidelines was
improved by handing these out at orientation and providing in RMOs’ pigeon holes but residents
continue to report low usage of them. They are now being developed into an electronic and
interactive format but that resource will not be available for this project.

Lessons learnt - Recommendations
The learning curve in the area of evidence implementation is immense for the novice change agent.
Some of the key lessons learnt during this Fellowship project could inform recommendations for
future programs to improve the practice of doctors, especially RMOs.

Development of key messages
Initially in this project a local expert consensus handbook was used to contextualize current
evidence. Unfortunately, it had little impact because of its layout. As well as choosing a locally
appropriate guideline it is therefore important to develop a cache of practical tools for bedside
access by the busy clinician.

Understand the local context
It was expected that a web of health professionals surrounded the RMOs and impacted on their
practice. The influence of senior staff was anticipated but not to extent identified by RMOs. The
effect of nursing staff, pharmacy and PCU staff were also important influencers of behaviour.
Teaching RMOs alone was not sufficient to change practice. A broader approach was required.
Where the target group is transitory, it is paramount to understand the structure and dynamics of the
organization, identify key people and committees, and analyse the barriers to the project at the
outlet, and throughout.
Plan for sustainability and institutionalisation of change
Several previous projects targeting pain documentation had not created sustainable improvement at our Centre. This is because a project is short and finite. For change to be sustained, clinician behaviour change needs to be coupled with change in organisational processes. To impact on the clinical behaviour of RMOs it is important to have well defined processes and clinical expectations in place so that the resident who rotates in for a 13-week rotation can become rapidly orientated to optimal practice. Ideally, before any project is implemented, one of the outcomes should include an ongoing program/plan for sustainability.

Understand your target group - junior staff challenges
Seeking out ongoing feedback from RMOs regarding their perceptions about pain management has been invaluable. It has informed the development of strategies and has offered an insight into the unique challenges in postgraduate education of residents. Residents’ lack of insight into the extent of the problem of cancer pain and their perceptions of best cancer pain management has been difficult to challenge because of their lack of time and availability. To optimise teaching of this group of doctors, changes need to take place in hospitals to facilitate bedside and other innovative teaching opportunities, such as computer-based learning and perhaps mandatory competencies to counteract the increasing threats to protected time for learning.

Conclusion
RMOs were chosen as the target group for this project because, as they were at the start of their careers, it was expected that they would be more “malleable” to changing their clinical behaviour. This project has revealed that there are many unique challenges in postgraduate teaching and many factors, both individual and organisational, that impact on practice change. Understanding the adult learning style of RMOs and how they interact with the system in which they begin their working lives has implications for the patients they care for now and in the future. To overcome access issues and allow interventions to change RMOs’ clinical behaviour future programs will need to:

• engage all who impact on residents from senior medical staff, to administrators and postgraduate teaching bodies;
• include innovative or interactive education programs; and
• provide residents with significant incentives for further learning (to overcome the pull of a heavy clinical workload) such as qualifications, mandatory competencies or enforced protected time for learning.

References


o Peter MacCallum Cancer Centre. 2007. Strategic plan 2006-2010. Peter MacCallum Cancer Centre, Melbourne, 16.

o Bero et al. 1998 Closing the gap between research and practice: an overview of systematic reviews of interventions to promote the implementation of research findings. British Medical Journal, 15; 317 (7156): 465–468.